

Governance and Organizational Readiness for AI–IoT Sustainability Initiatives: A Qualitative Study from Kuwait

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ABSTRACT

Artificial Intelligence (AI) and the Internet of Things (IoT) are widely promoted as enabling technologies for environmental sustainability, yet the translation of technical capability into measurable outcomes remains inconsistent in transitional contexts. This paper presents a qualitative synthesis from twelve purposively selected expert interviews in Kuwait spanning government/regulatory entities, private-sector implementation (ICT and banking), higher education, and environment-related practice. Using systematic thematic analysis supported by AI-assisted qualitative coding and iterative human review, we identify three cross-cutting mechanisms shaping perceived AI–IoT sustainability impact: (1) capability and operational barriers (skills gaps, legacy routines, uneven digital culture), (2) governance readiness constraints (fragmented coordination and regulatory/data-governance lag), and (3) outcome-driven acceptance (adoption increases with visible service value while trust and workforce concerns constrain legitimacy). We translate these mechanisms into pilot-to-scale implementation implications and propose concise evaluation guidance grounded in information-system success considerations. This manuscript is intentionally streamlined and focused on the core mechanisms and practical implications, while related extensions (e.g., expanded thematic coverage and broader framework development) are presented elsewhere.

JEL Codes:

Keywords: Artificial Intelligence; Internet of Things; Environmental Sustainability; Readiness; Governance; Kuwait; Qualitative Study.